

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
11 August 2005 (11.08.2005)

PCT

(10) International Publication Number
WO 2005/073412 A1

(51) International Patent Classification⁷: **C21B 13/00**, 3/04

(21) International Application Number:
PCT/AU2005/000112

(22) International Filing Date: 31 January 2005 (31.01.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2004900407 30 January 2004 (30.01.2004) AU

(71) Applicant (for all designated States except US):
TECHNOLOGICAL RESOURCES PTY. LIMITED
[AU/AU]; 55 Collins Street, Melbourne, Victoria 3000 (AU).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **DRY, Rodney,**

James [AU/AU]; 326 The Boulevard, City Beach, Western Australia 6015 (AU). **BATTERHAM, Robin, John** [AU/AU]; 153 Park Drive, Parkville, Victoria 3052 (AU).

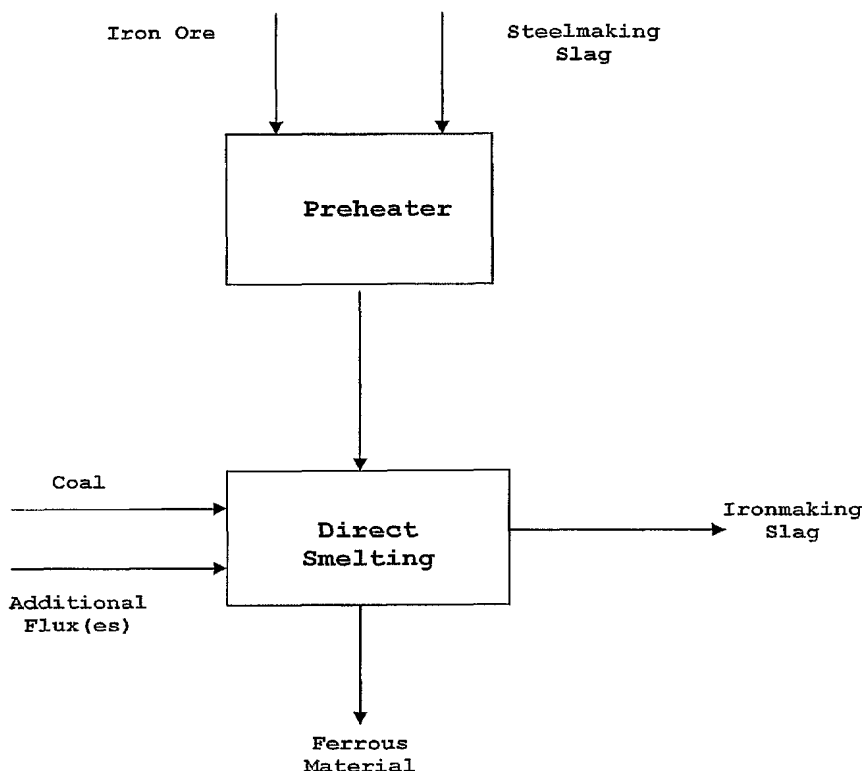
(74) Agent: **GRIFFITH HACK**; Level 3, 509 St Kilda Road, Melbourne, Victoria 3004 (AU).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,

[Continued on next page]

(54) Title: **IRONMAKING AND STEELMAKING**



(57) Abstract: A steelmaking process is disclosed. The process includes producing molten steel and molten steelmaking slag in a steelmaking process, the steelmaking slag including iron units and flux units, and thereafter producing molten iron in a molten bath based direct smelting process using a substantial portion of the steelmaking slag as part of the feed material requirements for the direct smelting process. A direct smelting process is also disclosed. The process includes pre-treating ferrous material including steelmaking slag and thereafter direct smelting molten iron using the pretreated ferrous material as part of the feed material for the process.

WO 2005/073412 A1



ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,
SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN,
GQ, GW, ML, MR, NE, SN, TD, TG).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Published:

— *with international search report*